

SUNNYSIDE GOLD CORPORATION - ANIMAS BASIN

Overview

Policy questions regarding innovative actions and final mine closure requirements have arisen as a result of recent discussions with the Colorado Department of Public Health and Environment, and Sunnyside Gold Corporation. We would like your guidance on how to proceed with this situation. Known options are:

1. Do nothing.
2. Let the Mine take care of it.
3. Let the State take care of it.
4. Let the stakeholders take care of it.
5. EPA enforce either as NPDES overfiling or as Superfund
6. EPA participate as a partner in negotiations.

Background

The upper Animas River Basin including Silverton, and Durango in south-western Colorado has a long history of extensive metal mining. Most of the mine-related sources are from abandoned sites that date back to the 1800s. Mining peaked in the 1950s and then began to wane; more recently, tourism has begun to grow in importance. By 1991, the last mining operation, the Sunnyside Mine, closed operations. Currently, that mine is the only mining facility under regulatory control in the upper watershed.

Watershed Group

The Animas Basin has a very active local stakeholders group, composed of local governments, the mining industry, and environmental groups with a support group of State and Federal agencies in Denver to assist. Colorado Center for Environmental Studies has facilitated the first few meetings as a test case for use of innovative technologies for DOE. A local coordinator, Bill Simon, has been hired using Mining Headwaters funds.

Environmental Problems

Because of the severity of impacts on aquatic life within the upper basin streams, the Water Quality Control Division in cooperation with other stakeholders conducted three years of widespread water quality stream monitoring and biological sampling, during 1991 through 1993. The focus of the watershed group was first to gain an understanding of the stream monitoring information. In March, the Water Quality Control Commission meet in Silverton to consider new water quality standards, goal based. The new upgraded stream standards are approved to be effective in three years. In the interim existing water quality is to be maintained.

Sunnyside Mine

The Sunnyside Gold Corporation (owned by Echo Bay company of Canada) took over after an environmental disaster caused the original company to go bankrupt. Sunnyside did not make a profit at the mine and started shutdown procedures approximately 5 years ago. Sunnyside has invested over 2 million dollars on-site for reclamation. The Sunnyside law suit was filed by Sunnyside Gold Corporation (owned by Echo Bay Company). This law suit was filed against the State of Colorado by Sunnyside because the State told them that if they plugged the American Tunnel and the Terry Tunnel and this plugging resulted in seeps, Sunnyside would be required to get NPDES permits for the seeps.

Draft Consent Agreement

In the draft settlement agreement, Sunnyside is proposing to trade clean up of non-point sources and to treat Cement Creek on a short-term basis for the increased metals load expected to be created from the plugging. In return, Sunnyside wants to be released from its existing NPDES permits and wants CDPHE to agree that no permits will be required for the seeps. Sunnyside is proposing to meet 520 $\mu\text{g/l}$ dissolved zinc for a five year period. CDPHE is not comfortable with the five year time period. They want to wait until the mine pool reaches equilibrium and adequate data show that the 520 $\mu\text{g/l}$ zinc goal is met prior to release.

EPA's Concerns on Draft Consent Agreement

- ◆ Goals of proposal are not to meet underlying standard (for reference acclimated brown trout survive at 225 $\mu\text{g/l}$ zinc)
- ◆ Proposal is short-term - what will happen in long-term?
- ◆ Precedential nature of agreement - at other facilities EPA and CDPHE have required NPDES permits for seeps
- ◆ Proposal lacks enforceability, adequate monitoring, and performance measures

EPA's Proposal

- NPDES permit with in-stream compliance points to achieve reasonable improvement in water quality towards the underlying standard
- Performance goals for non-point source clean ups
- Monitoring of in-stream point and performance goals with an iterative feedback mechanism requiring additional work based on underlying target
- Financial assurance - NPDES permit should be issued to Echo Bay and Echo Bay should sign agreement
- Public and watershed group should be involved

CDPHE's Response to EPA's Proposal

- Will not require NPDES permit with in-stream compliance points to achieve reasonable improvement in water quality towards the underlying standard
- Will consider performance goals for non-point source cleanups
- Will use in-stream monitoring as a goal, but will not have an enforceable number
- Will consider financial assurance
- Will get public and watershed group involved

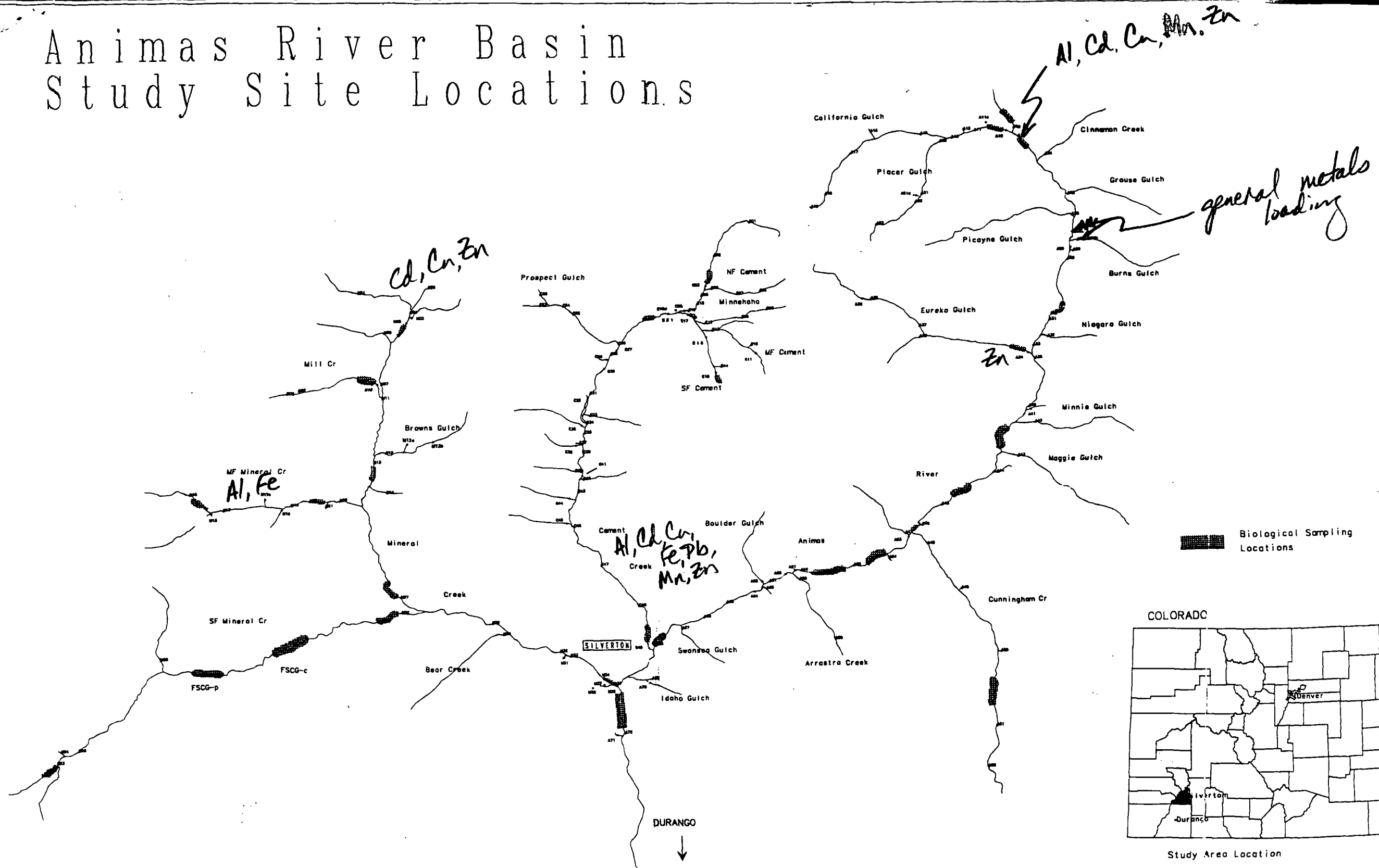
Outstanding Issues

- ⊗ NPDES Permit - are we going to stand tough? Could an enforceable agreement substitute for a permit? How will EPA enforce an this agreement?
- ⊗ To what clean up goal are we going to hold Sunnyside? Current stream standards? TMDL approach? How does this relate to the ongoing watershed cleanup efforts?
- ⊗ What is the "right number" for zinc standard - CDOW exploring alternative zinc numbers based on more fish studies. The stakeholders with EPA assistance are conducting ongoing monitoring and targeting efforts.- Currently 520 mg/l zinc, goal is 260 mg/l.
- ⊗ How much financial assurance is adequate and who will hold the bond?

Options and Next Steps

1. **Do nothing.**
 - ▶ No action - no environmental clean-up
2. **Let the Mine take care of it.**
 - ▶ The mine plug will be closed - no additional environmental clean-up (Sealing of the mine tunnel is considered by most experts to be the best management practice given certain conditions).
 - ▶ We will need to monitor carefully to determine if there are any releases (Very difficult and very expensive)
3. **Let the State take care of it.**
 - ▶ The State can sign the negotiated settlement which includes approximately 5 million in clean up in other areas in the basin, however the company is not comfortable with this option.
 - ▶ If the mining company walks the Colorado Division of Minerals and Geology will need to revoke the bond of approximately 1.2 million.
 - ▶ If State decides to litigate - will we give them any support?
4. **Let the stakeholders take care of it.**
5. **EPA enforce either as NPDES overfiling or as Superfund**
 - ▶ Permits group needs to decide whether we are going to require a permit
 - ▶ Enforcement needs to decide what we plan to do if State signs a bad settlement
6. **Participate as a partner in negotiations.**
 - ▶ Decide how much financial assurance is adequate

Animas River Basin Study Site Locations



Colorado Department of Health
Water Quality Control Division
Nonpoint Source Unit

FIGURE 1. Site Location Map Of the Upper Animas River Basin

DS report, summary text: